



PTO/SB/01 (03-01)

Approved for use through 10/31/2002. OMB 0651-0032

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**DECLARATION FOR UTILITY OR  
DESIGN  
PATENT APPLICATION  
(37 CFR 1.63)**

☒ Declaration Submitted with Initial Filing  
OR  
☐ Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16 (e)) required)

**Attorney Docket Number** 06299P2 USA**First Named Inventor** Bing Ji, et al.**COMPLETE IF KNOWN****Application Number** /**Filing Date****Group Art Unit****Examiner Name****As a below named inventor, I hereby declare that:**

My residence, mailing address, and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**METHOD FOR ETCHING HIGH DIELECTRIC CONSTANT MATERIALS AND FOR CLEANING  
DEPOSITION CHAMBERS FOR HIGH DIELECTRIC CONSTANT MATERIALS***(Title of the Invention)*

the specification of which

☒ is attached hereto

OR

☐ was filed on (MM/DD/YYYY)

as United States Application Number or PCT International

Application Number and was amended on (MM/DD/YYYY) (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
				YES	NO
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

☐ Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto:

[Page 1 of 2]

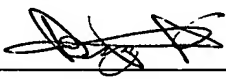

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Please type a plus sign (+) inside this box → ☒

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## DECLARATION — Utility or Design Patent Application

Direct all correspondence to: <input checked="" type="checkbox"/> Customer Number or Bar Code Label		23543		OR <input type="checkbox"/> Correspondence address below	
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<p>I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.</p>					
NAME OF SOLE OR FIRST INVENTOR :			<input type="checkbox"/> A petition has been filed for this unsigned inventor		
Given Name (first and middle [if any]) Bing			Family Name or Surname Ji		
Inventor's Signature 			12 January, 2004 Date		
Residence: City Allentown		PA State	USA Country	USA Citizenship	
Mailing Address 6736 Windermere Court					
Mailing Address					
City Allentown	PA State	ZIP 18104	USA Country		
NAME OF SECOND INVENTOR:			<input type="checkbox"/> A petition has been filed for this unsigned inventor		
Given Name (first and middle [if any]) Stephen Andrew			Family Name or Surname Motika		
Inventor's Signature 			12 JANUARY 04 Date		
Residence: City Kutztown		PA State	USA Country	USA Citizenship	
Mailing Address 817 Noble Street					
Mailing Address					
City Kutztown	PA State	ZIP 19530	USA Country		
<input checked="" type="checkbox"/> Additional inventors are being named on the <u>1</u> supplemental Additional Inventor(s) sheet(s) PTO/SB/02A attached hereto.					



Please type a plus sign (+) inside this box → ☐

PTO/SB/02A (11-00)  
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## DECLARATION

ADDITIONAL INVENTOR(S)  
Supplemental Sheet  
Page 1 of 1

Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle [if any])		Family Name or Surname	
Ronald Martin		Pearlstein	
Inventor's Signature <i>Ronald Martin</i>		Date <i>22 January 2004</i>	
Residence: City Macungie	PA State	USA Country	USA Citizenship
Mailing Address 118 Brookfield Drive			
Mailing Address			
City Macungie	PA State	ZIP 18062	USA Country
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle [if any])		Family Name or Surname	
Eugene Joseph		Karwacki, Jr.	
Inventor's Signature <i>Eugene Joseph Karwacki</i>		Date <i>12 January 2004</i>	
Residence: City Orefield	PA State	USA Country	USA Citizenship
Mailing Address 5620 Snowdrift Lane			
Mailing Address			
City Orefield	PA State	ZIP 18069	USA Country
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle [if any])		Family Name or Surname	
Dingjun		Wu	
Inventor's Signature <i>Dingjun Wu</i>		Date <i>12 January 2004</i>	
Residence: City Macungie	PA State	USA Country	CHINA, P.R. Citizenship
Mailing Address 5754 Fresh Meadow Drive			
Mailing Address			
City Macungie	PA State	ZIP 18062	USA Country

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PTO/SB/81 (08-03)

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**POWER OF ATTORNEY  
and  
CORRESPONDENCE ADDRESS  
INDICATION FORM**

Application Number	10/723,714
Filing Date	26 November 2003
First Named Inventor	Bing Ji, et al.
Title	Method for Etching High Dielectric...
Art Unit	3641
Examiner Name	
Attorney Docket Number	06299P2 USA

I hereby appoint:



Practitioners at Customer Number:

23543

OR



Practitioner(s) named below:

Name	Registration Number

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please recognize or change the correspondence address for the above-identified application to:



The above-mentioned Customer Number:

OR



The address associated with Customer Number:

OR

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Address			
Address			
City	State	Zip	
Country			
Telephone	Fax		

I am the:



Applicant/Inventor.



Assignee of record of the entire interest. See 37 CFR 3.71.

Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

**SIGNATURE of Applicant or Assignee of Record**

Name	Mark L. Rodgers		
Signature			
Date	9 March 2004	Telephone	610-481-8817

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

\*Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.31 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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**STATEMENT UNDER 37 CFR 3.73(b)**

Applicant/Patent Owner: Bing Ji, et al.

Application No./Patent No.: 10/723,714 Filed/Issue Date: 26 November 2003

Entitled: Method for Etching High Dielectric Constant Materials and for Cleaning Deposition Chambers for...

Air Products and Chemicals, Inc., a corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or

2. ☐ an assignee of less than the entire right, title and interest.

The extent (by percentage) of its ownership interest is \_\_\_\_\_ %

in the patent application/patent identified above by virtue of either:

A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

OR

B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

2. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

3. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

☐ Copies of assignments or other documents in the chain of title are attached.

[NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

9 March 2004

Date

610-481-8817

Telephone number

Mark L. Rodgers

Typed or printed name

[Signature]

Signature

Assistant General Counsel, Patents

Title

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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**ASSIGNMENT**



For value received, we, Bing Ji, Stephen Andrew Motika, Ronald Martin Pearlstein, Eugene Joseph Karwacki, Jr., and Dingjun Wu, hereby sell, assign, and transfer to **AIR PRODUCTS AND CHEMICALS, INC.**, a corporation of the State of Delaware, having an office at 7201 Hamilton Boulevard, Allentown, PA 18195-1501, the entire right, title, and interest in and to the invention relating to

**METHOD FOR ETHCING HIGH DIELECTRIC CONSTANT MATERIALS AND FOR  
CLEANING DEPOSITION CHAMBERS FOR HIGH DIELECTRIC CONSTANT MATERIALS**



described in our application for Letters Patent of the United States (identified by Docket No. 06299P2 USA) executed of even date herewith, in and to all Letters Patent which may be issued upon said application, in and to any divisional or reissue applications based thereon, and in and to all Letters Patent upon said invention or improvements which may be granted in foreign countries. We hereby also assign and convey to said **AIR PRODUCTS AND CHEMICALS, INC.**, all the rights accruing to us by virtue of the International Convention for the Protection of Industrial Property (Art. 4), including the right to apply for and to have patents issued in its own name.

And we hereby authorize and request the Commissioner of Patents and Trademarks of the United States and the Officials of the Patent Offices of all other countries to issue the Letters Patent of their respective countries to said **AIR PRODUCTS AND CHEMICALS, INC.**, as assignee of the entire right, title, and interest in and to the same.

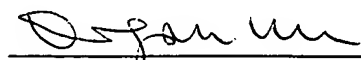
And we hereby promise and agree to execute all papers and perform all acts necessary to secure to and vest in said **AIR PRODUCTS AND CHEMICALS, INC.**, its successors and assigns, the rights conveyed as herein set forth.

 (L.S.)  (L.S.)  
Bing Ji Stephen Andrew Motika

12 January, 2004 12 JANUARY 04  
Date Date

 (L.S.)  (L.S.)  
Ronald Martin Pearlstein Eugene Joseph Karwacki, Jr.

January 22, 2004 12 January 2004  
Date Date

 (L.S.)  
Dingjun Wu

12 January 04  
Date